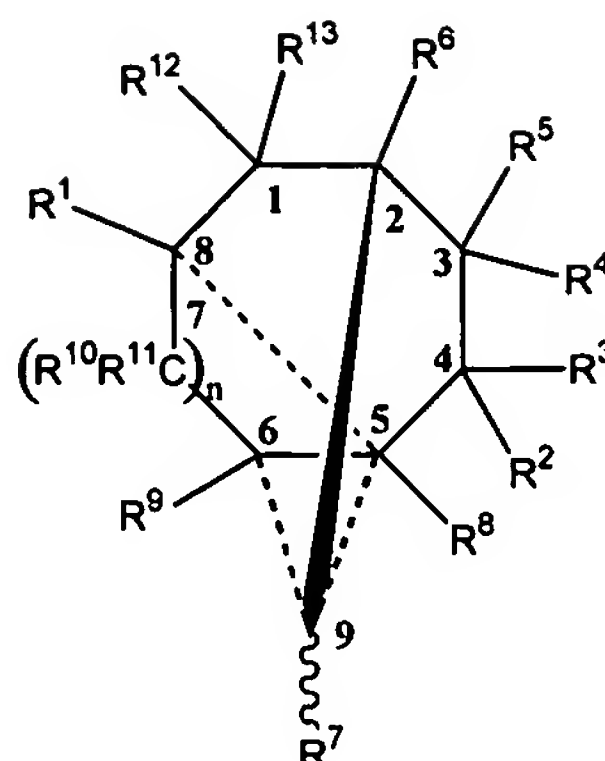


Claims

1. A compound of formula I



wherein

R^1 , R^4 , R^6 and R^7 are independently hydrogen, methyl or ethyl;

R^2 and R^3 are independently hydrogen, or C_{1-5} alkyl; or

R^2 and R^3 together with the carbon atom to which they are attached form a 5- or 6-membered cycloalkyl ring;

R^5 is hydrogen, or C_{1-4} alkyl;

R^8 is hydrogen, or branched lower C_{3-7} alkyl;

R^9 is hydrogen, methyl, ethyl, or branched lower C_{3-7} alkyl;

R^{10} is ethyl or propyl;

R^{11} is C_{1-4} alkyl;

R^{12} is hydroxy;

R^{13} is hydrogen, or C_{1-4} alkyl; or

R^{12} and R^{13} together with the carbon atom to which they are attached form a carbonyl group;

the dashed line represents either a C-C single bond or no bond; and

a) when C5 and C8 are connected by a single bond and C9 and C6 are connected by a single bond, C9 and C5 are not connected by a bond,

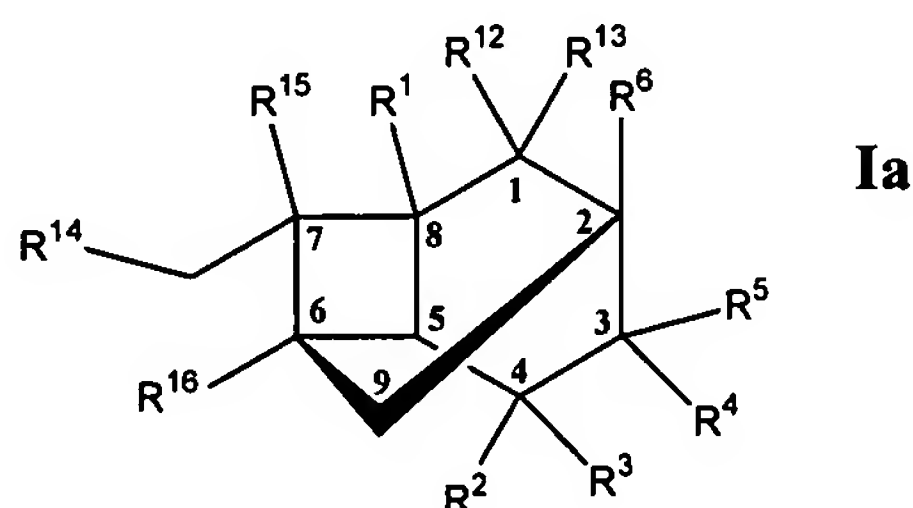
$n=1$,

R^7 , R^8 are hydrogen, and

R^9 is hydrogen, methyl or ethyl; or

- b) when C5 and C8 are connected by a single bond and C9 and C6 are connected by a single bond, C9 and C5 are not connected,
 $n=0$,
 R^7, R^8 is hydrogen,
 R^9 is a branched lower C_{3-7} alkyl; or
- c) when C5 and C8 are not connected by a bond, C9 and C5 are connected by a single bond,
 R^7 is hydrogen, methyl or ethyl,
 R^8 is a branched lower C_{3-7} alkyl, or
 R^7 and R^8 together with the carbon atoms to which they are attached form a 5- or 6-membered cycloalkyl ring,
 $n = 0$, and
the bond between C6 and C8 may be a single bond or a double bond.

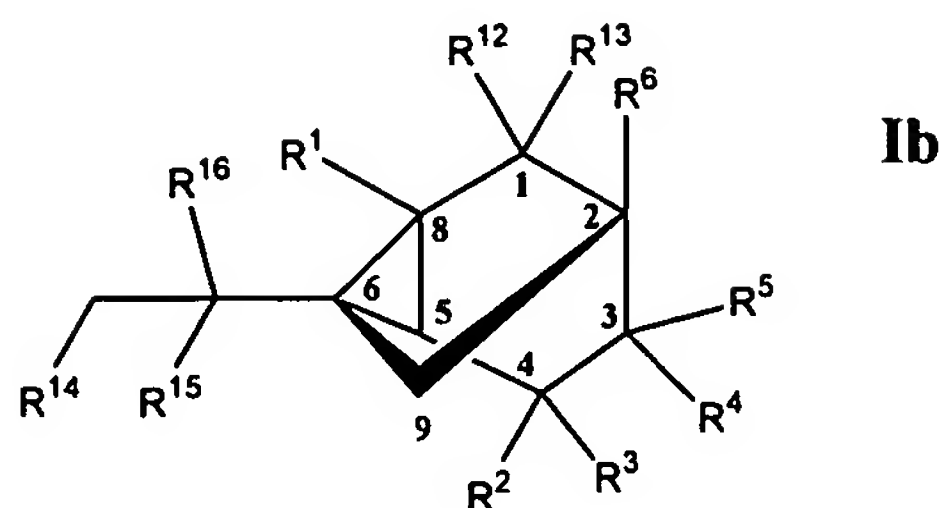
2. A compound according to claim 1 having a formula Ia



wherein

- R^1, R^4, R^6, R^{14} and R^{16} are independently hydrogen, methyl or ethyl;
 R^2 and R^3 are independently hydrogen, or C_{1-5} alkyl; or,
 R^2 and R^3 together with the carbon atom to which they are attached form a 5- or 6-membered cycloalkyl ring;
 R^5 is hydrogen, or C_{1-4} alkyl;
 R^{15} is C_{1-4} alkyl;
 R^{12} is hydroxy;
 R^{13} is hydrogen or C_{1-4} alkyl; or
 R^{12} and R^{13} together with the carbon atom to which they are attached form a carbonyl group.

3. A compound according to claim 1 of formula Ib,



wherein

R^1 , R^4 , R^6 , R^{14} and R^{16} are independently hydrogen, methyl or ethyl;

R^2 and R^3 are independently hydrogen, or C_{1-5} alkyl; or,

R^2 and R^3 together with the carbon atom to which they are attached form a 5- or 6-membered cycloalkyl ring;

R^5 is hydrogen, or C_{1-4} alkyl;

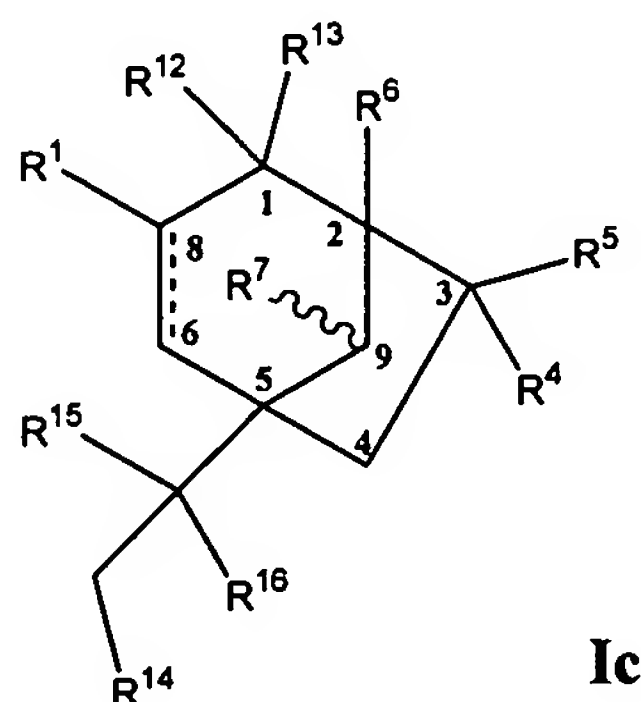
R^{15} is C_{1-4} alkyl;

R^{12} is hydroxy;

R^{13} is hydrogen or C_{1-4} alkyl; or

R^{12} and R^{13} together with the carbon atom to which they are attached form a carbonyl group.

4. A compound according to claim 1 of formula Ic,



wherein

R^1 , R^4 , R^6 , R^{14} and R^{16} are independently hydrogen, methyl or ethyl;

R^5 is hydrogen, or C_{1-4} alkyl;

R^7 and R^{14} are independently hydrogen, methyl or ethyl; or,

R^7 and R^{14} together with the carbon atoms to which they are attached form a 5- or 6-membered cycloalkyl ring;

R¹⁵ is C₁₋₄ alkyl;

R¹² is hydroxy;

R¹³ is hydrogen or C₁₋₄ alkyl; or

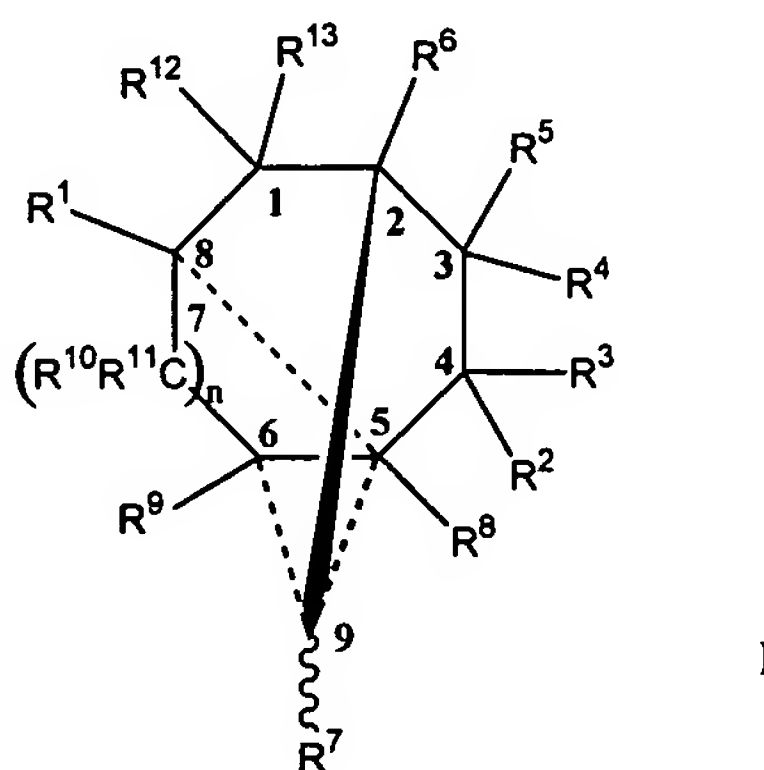
R¹² and R¹³ together with the carbon atom to which they are attached form a carbonyl group; and

the bond between C6 and C8 may be a single bond;

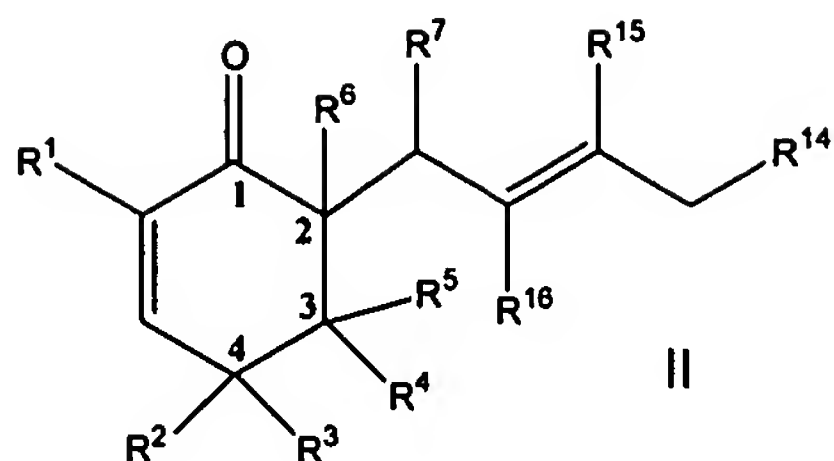
or the dotted line together with the bond between C6 and C8 may represent a double bond.

5. A compound according to claim 1 selected from the group consisting of 1,5,7,8,8-Pentamethyl-tricyclo[3.3.1.0^{2,7}]nonan-6-one; 1,5,7,8,8-Pentamethyl-tricyclo[3.3.1.0^{2,7}]nonan-6-one; 1,3,3,5,7,8,8-Heptamethyl-tricyclo[3.3.1.0^{2,7}]nonan-6-one; 3,3,5,7,8,8-Hexamethyl-tricyclo[3.3.1.0^{2,7}]nonan-6-one; 3,3,5,8,8-Pentamethyl-tricyclo[3.3.1.0^{2,7}]nonan-6-one; 5,7,8,8-Tetramethyl-tricyclo[3.3.1.0^{2,7}]nonan-6-one; 1-Isopropyl-3,3,5-trimethyl-tricyclo[3.2.1.0^{2,7}]octan-6-one; 5-Isopropyl-1,3-dimethyl-bicyclo[3.2.1]oct-3-en-2-one; 5-Isopropyl-1,3-dimethyl-bicyclo[3.2.1]octan-2-one; 5-tert-Butyl-1,3-dimethyl-bicyclo[3.2.1]oct-3-en-2-one; 5-sec-Butyl-1,3-dimethyl-bicyclo[3.2.1]oct-3-ene-2-one; 5-Isopropyl-3-methyl-bicyclo[3.2.1]oct-3-ene-2-one; 5,7-Diisopropyl-3-methyl-bicyclo[3.2.1]oct-3-en-2-one; 5-Isopropyl-3,7,7-trimethyl-bicyclo[3.2.1]oct-3-en-2-one; 1,3,5-Trimethyl-1,5,6,7,8,8a-hexahydro-1,4a-ethano-naphthalen-2-one; and 5,6,7,8,8-Pentamethyl-tricyclo[3.3.1.0^{2,7}]nonan-6-ol.
6. A flavour or fragrance composition comprising a compound as defined according to one of the preceding claims.
7. A flavour or fragrance composition according to claim 6 comprising at least one compound selected from the group of compounds of formula Ia as defined in claim 2 and at least one compound selected from the group of compounds of formula Ic as defined in claim 4.
8. A flavour or fragrance composition according to claim 7 comprising 5-tert-Butyl-1,3-dimethyl-bicyclo[3.2.1]oct-3-en-2-one and 1,5,7,8,8-Pentamethyl-tricyclo[3.3.1.0^{2,7}]nonan-6-one.

9. The use of a compound as defined in one of the claims 1 to 5 in fragrance and flavour applications.
10. The use of a compound according to claim 9 in perfumes, household products, laundry products, body care products, and cosmetics.
11. The use according to claim 9 and claim 10 wherein a compound is provided in an amount from 0.001 to 20% by weight.
12. A method of manufacturing a flavour or fragrance composition, comprising the step of incorporating a compound of formula I as defined in claim 1 to a base material.
13. A method of manufacturing a fragranced application, comprising the incorporation of a compound of formula I as defined in claim 1.
14. A method according to claim 13 wherein the fragranced application is selected from the group consisting of perfume, household product, laundry product, body care product and cosmetics.
15. A process of preparing a compound of the formula I as defined in claim 1



comprising the step of reacting a compound of formula II with ethyl aluminium dichloride or methyl aluminium dichloride



wherein

R^1 , R^4 , and R^6 are independently hydrogen, methyl or ethyl;

R^2 and R^3 are independently hydrogen, or C_{1-5} alkyl; or

R^2 and R^3 together with the carbon atom to which they are attached form a 5- or 6-membered cycloalkyl ring;

R^5 is hydrogen, or C_{1-4} alkyl;

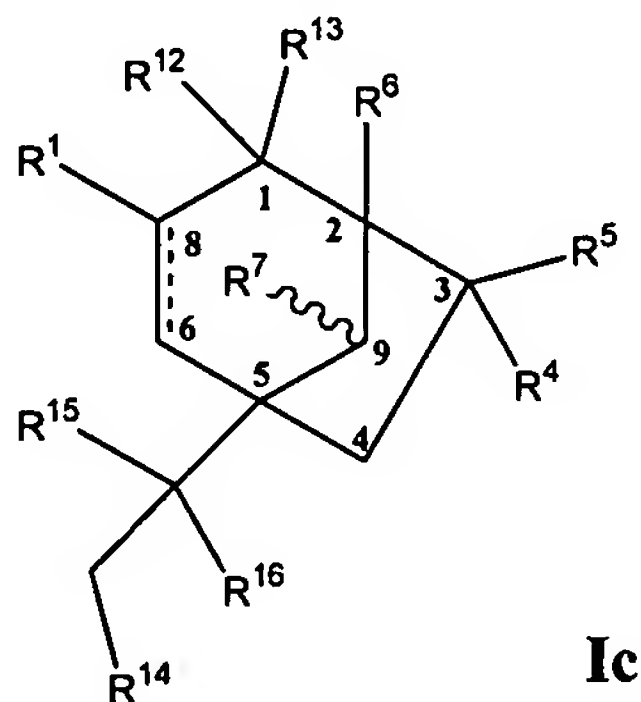
R^7 and R^{14} are independently hydrogen, methyl or ethyl; or

R^7 and R^{14} together with the carbon atoms to which they are attached form a 5- or 6-membered cycloalkane ring;

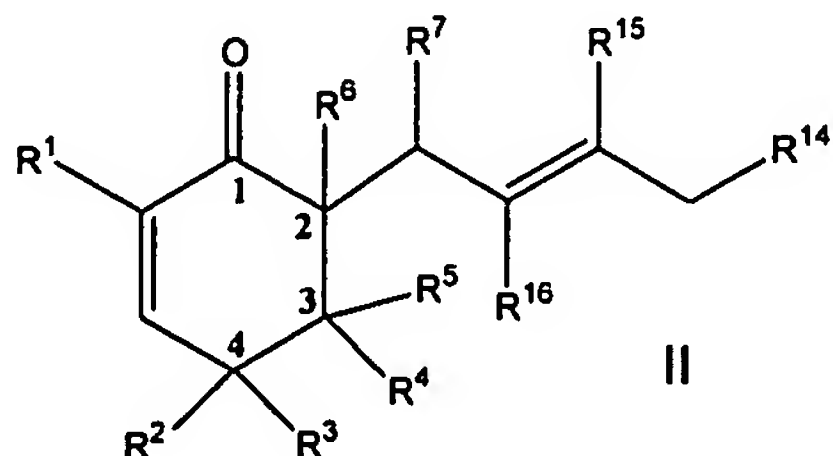
R^{16} is hydrogen, or lower branched C_{3-7} alkyl,

and optionally followed by the step of reduction and/or alkylation of the carbonyl group at C1.

16. A process of preparing a compound of the general formula Ic



comprising the step of converting a compound of formula II by photochemical induction



wherein

R^2 , R^3 , and R^{16} are hydrogen;

R^1 , R^4 and R^6 are independently hydrogen, methyl or ethyl;

R^7 and R^{14} are independently hydrogen, methyl or ethyl; or

R^7 and R^{14} together with the carbon atoms to which they are attached form a 5- or 6-membered cycloalkane ring;

R^5 is hydrogen, linear or branched C_{1-4} alkyl;

R^{15} is linear or branched C_{1-4} alkyl; and

and optionally followed by the step of hydrogenation across the double bond at C6 and C8, and

optionally followed by the step of reduction and/or alkylation of the carbonyl group at C1.